PATENT
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IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant:	Holger HAUPTMANN et al.	Conf.:	6560
Appl. No.:	09/890,804	Group:	1731
Filed:	October 1, 2001	Examiner:	C. Fiorilla
For:	METHOD FOR DIMENSIONALLY SINTERING CERAMICS		

11C/KW
10/29/02

AMENDMENT AND REPLY UNDER 37 C.F.R. § 1.111

Assistant Commissioner for Patents
Washington, DC 20231

October 25, 2002

Sir:

In reply to the Examiner's Office Action dated July 26, 2002, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

IN THE ABSTRACT OF THE DISCLOSURE:

Please replace the Abstract of the Disclosure with the rewritten Abstract of the Disclosure located below and provided on a separate sheet attached hereto:

--A process for the dimensionally-true sintering of ceramic pre-shaped items, in which the firing material is resting during sintering on supporting devices, not coated with metal, which independently adapt to the shrinkage dimensions which occur during the firing process or allow a contact-free support of the pre-shaped items.--

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IN THE SPECIFICATION:

Please delete the title beginning on page 15, line 1.

Please add the following heading before the paragraph beginning on page 1, line 7:

--BACKGROUND OF THE INVENTION--

Please add the following heading before the paragraph beginning on page 2, line 11:

--BRIEF SUMMARY OF THE INVENTION--

Please add the following paragraphs before the paragraph beginning on page 3, line 18:

--BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows by way of example the attachment of two S-shaped hooks (X) at a fixed position (Y) within a firing chamber (Z), the firing material (A) already being fitted onto the hooks.

Figure 2 shows by way of example the attachment of the two S-shaped hooks (X) inside the firing chamber (Z), each of the hooks being freely movable on a track (S), for example over rollers, and thus being able to yield to the forces which occur during the firing process and the firing material (A) already being fitted onto the hooks.

Figure 3 shows that the hooks can also be suspended in a bar-shaped track structure (B), consisting of vertical elements of (B) and horizontal elements of (B), which permit a suspension of the hooks (X) which support the firing material (A).

Figure 4 shows by way of example the attachment of two hooks (X) outside the firing chamber (Z), which is screened from the supports via a heat insulator (W), each of the hooks being freely movable on a sliding bearing (G) and thus being able to yield to the forces which occur during the firing process, and (V) is a mechanical, electronic and/or optical scanning device.

Figure 5 shows by way of example the attachment of two props (T) for the firing material, the props being freely movable on sliding bearings (G) outside the firing chamber (Z) and thus being able to yield to the forces which occur during the firing process. (W) is a heat insulator, and (V) is a mechanical, electronic and/or optical scanning device.

Figure 6 shows the placing of a bridge (1) on rods (2) which are housed flexibly inside so-called firing wadding (3).

Figure 7 shows the prosthetic work (1) is laid on a roller-shaped structure (2), the distances between the rollers adjusting independently during the firing process.

Figure 8 shows the supporting pins (3) required during the milling of the work piece (1) are left in place after the milling

process so that they serve as a stable multipoint support on a level firing base with the same shrinkage behaviour.

Figure 9 shows the perform remainder (3) serves together with the separating powder (4) as a supporting device according to the invention.

Figure 10 shows the firing material (A) resting on two Y-shaped supports (B). Two holding pins (H) are attached to the firing material (A) which are either produced during the shaping process or attached to the firing material after the shaping process.

Figure 11 shows the firing material (A) resting on a magnetic field which is generated by the magnetic bases or pre-shaped parts (M), the polarity of the magnets having to be such that the firing material floats away from the base. The whole device is within firing chamber (Z), and magnets (M) can be used.

Figure 12 shows the firing material (A) resting on gas streams (L), the latter exiting through a base plate provided with throughflow openings. The devices are located inside the firing chamber (Z).

DETAILED DESCRIPTION OF THE INVENTION--